c. & imm. Rabicho, Brazil. Oct. 8, 1909.

d. 3 ad. Boca de Homiguera, Brazil. Oct. 9, 1909.

e, f. ♂ ♀ ad. 10 miles below Boca de Homiguera, Brazil. Oct. 12, 1909.

d. Irides grey-brown; bill black; legs and toes slate-

coloured.

2. Bill slate-coloured; otherwise as male.

The young males are moulting from the grey plumage to the black.

Very few examples of this bird were seen: it was observed frequenting the thick undergrowth along the riverbank and was very tame.

[To be continued.]

IV.—On the Birds of the Cayman Islands, West Indies. By Percy R. Lowe, B.A., M.B. (Cantab.), M.B.O.U.

(Text-figure 7.)

## (i.) Introductory Remarks.

In the following paper I have endeavoured to compile a list of the Birds of the Cayman Islands on the lines of the "Revised List of the Birds of Jamaica," by Dr. P. L. Sclater, which was published in the 'Handbook of Jamaica' for 1910.

The Cayman Islands (see text-fig. 7, p. 138), which form a political dependency of Jamaica, are situated in the western end of the Caribbean Sea, between the meridians of 79° 44′ and 81° 26′ W., and the parallels of 19° 49′ and 19° 46′ N. They consist of three islands — Grand Cayman, Little Cayman, and Cayman Brac.

The island of Grand Cayman is seventeen miles in length and between four and seven miles in width.

Little Cayman and Cayman Brac are each about nine miles long by one and a half wide. They lie about six miles apart. The west end of Little Cayman is some sixty miles from Grand Cayman, and the whole group is distant about a hundred and eighty miles in a north-westerly direction from Jamaica. Grand Cayman lies one hundred and seventyfive miles to the south of the nearest point of Cuba. Cayman Brac is nearer by some eighty miles.

A word on the subject of the geology of the islands may be of interest and is necessary in order to appreciate the main features of their avifauna, for although politically a dependency of Jamaica, geologically speaking the Caymans are quite distinct.

Text-fig. 7.



Sketch-map of the Cayman Islands.

If a map shewing the contours of the sea-bed in this part of the Caribbean is examined (cf. Agassiz, "Three Cruises of the 'Blake,'" Bull. Mus. Comp. Zool. Harvard, vol. xiv. (1888) p. 99, fig. 57), it will be seen that a deep submarine

ridge extends from Cape Cruz, the most southerly point of Cuba, right across this western division of the Caribbean Sea into the Bay of Honduras.

The major part of this ridge lies at a depth of 1000 fathoms, but here and there along its length portions of it have been upraised so that they are only some 500 fathoms or less beneath the surface. On these last elevations or plateaux appear still more elevated areas or banks, the summits of which have attained to the level of the "plane of the limiting line of sedimentation," or, in other words, to the level at which reef-building coral organisms can flourish. These reef-building organisms have been solely answerable for the formation of the Caymans, which are purely coral islands. In this respect, therefore, the Caymans differ from all the other West Indian Islands except the Bahamas.

Immediately to the south of the submarine ridge on which the islands are situated, and between them and Jamaica, there stretches a profoundly deep submarine valley known as "Bartlett's Deep." The average depth of Bartlett's Deep is 18,000 feet, but a long trough, which represents its deepest part and which is situated, so to speak, at the very foot of the stupendous range of which the Caymans form the summit, has a depth of 22,000 feet. The water between Cayman Brac and Cape Cruz, the nearest point of Cuba, attains to a depth of 3000 feet.

To all intents and purposes, then, so far as the avifauna of the Caymans is concerned, we may look upon them as pseudo-oceanic islands. They are obviously of very recent origin, things of yesterday as compared with the other Antillean Islands, and the only way in which they have been "colonized" has been by the agency of wind and marine currents.

We should consequently not expect to find any very marked changes of a specific character, still less of generic importance, in the resident land-birds which characterize the avifauna of the Caymans. Nor do we find such changes. It is, however, remarkable how in many cases these resident land-birds have come to shew either greater or smaller differences from their allies of the neighbouring islands. The direction of the trade-winds would seem to favour colonization from Cuba rather than from Jamaica, but we must make allowance for chance storms and hurricanes.

Grand Cayman and Little Cayman are exceedingly flat and very little raised above sea-level, being neither more nor less than upraised level reefs of coral limestone. Cayman Brac is somewhat higher. It is wedge-like in appearance. The thick end of the wedge, which is situated at the east end of the island, rises almost perpendicularly to a height of eighty feet or more. The coral limestone of which the islands are composed has naturally been much worn and weathered by wind and rain, and supports a scanty but fertile soil.

As regards the flora, there is, at any rate at the present day, no luxuriant forest; the greater part of the islands being covered, where not converted into plantations, with thick scrub consisting of logwood, fustic, ironwood, and a few mahogany trees, while low bushes and creepers are thickly interspersed. Where the soil is more sandy there are large areas of thatch-palm scrub.

A feature of the physical condition of the islands is the number of marshy areas and boggy pools. These marshy spots are covered or dotted with rank grass and other marshloving vegetation, and are often surrounded by thick belts of mangrove trees in which birds swarm. Along the northern shore of Grand Cayman these mangroves flourish particularly well and grow to a great height. Although there are large areas of uncleared scrub and useless marsh, the islands (Grand Cayman especially) are thickly dotted with small plantations which harbour a noticeably large quantity of birds. We know, indeed, of few islands in the West Indies where birds are more plentiful or where the conditions are more favourable to bird-life.

We must acknowledge, however, that the general avian picture is entirely changed in summer after the departure

of the hosts of American migrants which visit the islands for the winter months only.

So far as I have been able to ascertain, nothing was known of the birds of the Cayman Islands prior to the year 1886at any rate, as far as professed ornithologists are concerned. In the summer of that year Mr. W. B. Richardson visited the islands on behalf of Mr. C. B. Cory, the well-known American authority on West-Indian birds. As the result of this expedition Mr. Cory published a description of no less than thirteen new species of birds which had been found on the Grand Cayman alone ('Auk,' iii. pp. 497-502, 1886). Following this he described a new Vireo from the same island in 1887 ('Auk,' iv. p. 7, 1887), and published a list of the birds collected by Mr. C. J. Maynard on the islands of Little Cayman and Cayman Brac in 1889 ('Auk,' vi. p. 30, 1889). In May 1887, Mr. Charles H. Townsend paid a short visit to Grand Cayman, and Mr. Robert Ridgway described, among other birds contained in his small collection, a new species of Dendræca (Proc. U.S. Nat. Mus. vol. x. 1887).

From this date until the year 1896, when Mr. Taylor, of Jamaica, went there on behalf of the Tring Museum, no other collector seems to have visited the islands. Mr. Taylor made a magnificent collection of birds which are now in Mr. Walter Rothschild's Museum, and among them were examples of a new species of Finch from Grand Cayman which Dr. Hartert described as *Melopyrrha taylori* (Nov. Zool. vol. iii. p. 257, 1896).

In January 1904, while on board the yacht 'Emerald' chartered by Sir Frederic Johnstone, I had the opportunity, in company with the late Dr. Bowdler Sharpe, of seeing something of the bird-life on all the three Caymans.

On two other occasions I have visited the Grand Cayman and Little Cayman with Sir Frederic, and I have written a few remarks on some birds which I collected there ('The Ibis,' 1909, pp. 339-347).

In March 1904, Lord Crawford visited the Caymans in

his yacht the 'Valhalla,' and Mr. M. J. Nicoll, who accompanied him, made a collection of birds which he described in 'The Ibis' of the same year. Among these birds were specimens of two new species, which Mr. Nicoll described as *Pitangus caymanensis* and *Dendroica crawfordi*.

An examination of the list of birds given below reveals the fact that the avifauna of the Cayman Islands, as at present known to us, comprises some 75 species. This small total is almost certainly due to two reasons—first, that the collectors who have visited the islands since 1886 have naturally confined their work chiefly to the land-birds; secondly, that there appear to have been no local naturalists sufficiently interested to make records of the migratory and casual birds which visit the islands. Of the 75 species already recorded, about 40 would appear to be resident; the remainder being made up of winter visitors, of birds which pass through on migration in the autumn or spring, and of casual stragglers.

Of the 40 resident birds, 20 are peculiar to one or other of the Caymans, or to all three, and do not occur elsewhere. But with regard to this division we are bound to state that in the case of one or two, or even more, we have experienced the greatest difficulty in appreciating the distinctions on which they have been considered to rank as new species or subspecies. The remaining 20 resident birds comprise those which have a more or less wide range outside the islands. Of these Dendræca vitellina is found nowhere else but in Swan Island, while in the case of Amazona leucocephala, Myiarchus sagræ, and Holoquiscalus gundlachi, the only other known locality in which they are found is Cuba.

The Ground-Dove, again, is only found elsewhere in Jamaica.

The following is a list of those species and subspecies which have been considered to be absolutely peculiar to the Cayman Islands:—

Species and Subspecies.		Little Cayman.	
Zenaida spadicea Leptoptila collaris Amazona caymanensis Colaptes gundlachi	*	*	
Melanerpes caymanensis  Elainea martinica caymanensis  Elainea martinica complexa  Tolmarchus caudifasciatus caymanensis.	*	• • p •	* ?*
Mimocichla ravida Mimocichla rubripes coryi Vireosylva caymanensis Vireo crassirostris alleni	* **	*	* *
Dendrœca petechia auricapilla Dendrœca crawfordi Melopyrrha taylori Euethia olivacea coryi	* *	*	*
Spindalis salvini Cœreba sharpii Icterus bairdi Holoquiscalus caymanensis	* *	*	*

Note.—Mr. Cory has considered the *Myiarchus* found on Grand Cayman to be worthy of specific rank, and has given it the name of *deni-gratus*. I think that there can be no question that the bird is identical with *M. sagræ* of Cuba. Mr. Ridgway considers the Ground Dove to be peculiar to the island so far as subspecific rank is concerned. He calls it *insularis*.

From this list it will be noticed that there are no genera peculiar to the islands. The genus *Melopyrrha* is, however, met with in no other locality except Cuba.

Mr. Ridgway (Birds North & Middle Amer. pt. i. p. 562) says: "This genus is an exaggeration of *Sporophila*, but between the most similar species of the latter and the type of *Melopyrrha* there is a considerable gap."

Spindalis is a well-marked genus which, with the exception of Cozumel Island off Yucatan (S. benedicti), is restricted elsewhere to the Bahamas and the Greater Antillean Islands (Cuba, Hispaniola, Jamaica, Porto Rico). The species peculiar to Grand Cayman is very distinct.

Mimocichla is another interesting genus restricted elsewhere to the Bahamas, Cuba, Hispaniola, Porto Rico, and

Dominica. If we accept Mr. Ridgway's new genus *Haplo-cichla*, its occurrence in Jamaica is ruled out of court.

It is interesting to note that Humming-Birds are not found in the Caymans. Practically every other island which is not a mere rock in the Caribbean basin contains some of these birds. The only exception that I am acquainted with is Swan Island. It is all the more curious since the flora seems perfectly suitable. Orchids are met with in profusion in all three islands, and on Grand Cayman Schomburgkia thomsoniana is peculiar and found nowhere else.

Finally, we may remark that there appears to be every possibility of very greatly adding to the present number of birds recorded from the Caymans, especially as regards those merely passing through on their way south or north in autumn and spring.

The Caymans, Mysteriosa Bank, and Swan Island seem to lie along an old migratory track across the Caribbean Sea, the lines of which are suggested by the sunken submarine ridge joining Cuba with Honduras, to which I have previously referred, and also by the sunken land now represented by the Mosquito, Rosalind, Serranilla, and Pedro Banks, which apparently once formed a link between Jamaica, Honduras, and Nicaragua.

During the periods of migration various species of Ducks, besides other birds which we need not mention here, pass regularly over Swan Island and settle there, and during these migratory times the islanders notice a great influx of birds of prey, which apparently come in order to pick off stragglers. Doubtless the same thing occurs in the Caymans, so that it appears to me that these islands would form a most interesting station for observing the passage of migrants north and south.

### (ii.) List of the Birds of the Cayman Islands.

1. COLUMBA LEUCOCEPHALA. (Bald-pate Pigeon.)

Columba leucocephala Cory, Auk, vi. p. 32 (1889: Cayman Brac); Sharpe, Hand-l. B. i. p. 70 (1899).

Hab. Central and South America; fairly common in the Grand Cayman, and also found in Cayman Brac: resident.

2. ZENAIDA MERIDIONALIS. (Pea-Dove.)

Zenaida amabilis Cory, Auk, vi. p. 32 (1889 : Cayman Brac).

Zenaida meridionalis Sharpe, Hand-l. B. i. p. 76 (1899). Hab. Antillean Islands.

Mr. C. J. Maynard found this Dove on Cayman Brac in 1889.

3. Zenaida spadicea. (Cayman Pea-Dove.)

Zenaida spadicea Cory, Auk, iii. p. 498 (Grand Cayman); Nicoll, Ibis, 1904, p. 587 (Little Cayman); Lowe, Ibis, 1909, p. 341 (Little Cayman); Sharpe, Hand-l. B. i. p. 76 (Grand Cayman).

Zenaida richardsoni Cory, Auk, iv. p. 7 (1887: Little Cayman).

Hab. Peculiar to the Cayman Islands; common on Little Cayman: resident.

4. Chamæpelia Jamaicensis. (Jamaica Ground-Dove.)

Columbigallina passerina Cory, Auk, iii. p. 502 (1886: Grand Cayman); id. Auk, vi. p. 32 (1889: Cayman Brac).

Columbigallina passerina insularis Ridgw. Proc. U.S. Nat. Mus. vol. x. p. 574 (1887: Grand Cayman).

Chamæpelia passerina Nicoll, Ibis, 1904, p. 585 (Grand Cayman).

Chamæpelia jamaicensis Lowe, Ibis, 1909, p. 341 (Grand and Little Cayman).

Chamæpelia insularis Sharpe, Hand-l. B. i. p. 82 (1899).

Hab. Peculiar to Jamaica and the Cayman Islands: common and resident.

5. LEPTOPTILA COLLARIS. (Cayman White-bellied Dove.) Engyptila collaris Cory, Auk, iii. p. 498 (1886: Grand Cayman).

Leptoptila collaris (Cory); Sharpe, Hand-l. B. i. p. 87 (1899: Grand Cayman).

Hab. Peculiar to Grand Cayman: resident.

6. Gallinula galeata. (American Water-hen.)

Gallinula galeata (Licht.); Cory, Auk, iii. p. 502 (1886: ? Grand Cayman, ? Little Cayman); Nicoll, Ibis, 1904, p. 586 (Grand Cayman); Sharpe, Hand-l. B. i. p. 107 (1899).

Hab. North and South America: resident, fairly common on Grand Cayman.

7. Arenaria interpres. (Turnstone).

Arenaria interpres (Linn.); Cory, Auk, iii. p. 502 (1886: Grand Cayman); id. Auk, vi. p. 32 (1889: Cayman Brac); Ridgw. Proc. U.S. Nat. Mus. vol. x. p. 575 (1887: Grand Cayman); Sharpe, Hand-l. B. i. p. 146 (1899).

Strepsilas interpres Nicoll, Ibis, 1904, p. 586 (Grand Cayman).

Hab. Cosmopolitan: a winter visitor to the Caymans, but "birds of the year" may be resident for a year or more.

8. ÆGIALITIS SEMIPALMATA. (Semipalmated Shore-Plover.)

Ægialitis semipalmata Cory, Auk, iii. p. 502 (1886: Grand Cayman); id. Auk, vi. p. 32 (1889: Cayman Brac).

Ægialeus semipalmatus Sharpe, Hand-l. B. i. p. 154 (1899).

Hab. North America: this bird is resident in Jamaica and breeds there. Whether it does so in the Caymans I am unaware. I have included it among the residents.

9. Totanus flavipes. (Yellow-legged Sandpiper.)

Totanus flavipes Cory, Auk, iii. p. 502 (1886); Sharpe,
Hand-l. B. i. p. 160 (1899).

Hab. North America: a winter visitor to the Caymans.

10. Tringoides Macularius. (Spotted Sandpiper.)

Actitis macularia Cory, Auk, iii. p. 502 (1886: Grand Cayman); id. Auk, vi. p. 31 (1889: Little Cayman, Cayman Brac).

Tringoides macularius Sharpe, Hand-l. B. i. p. 161 (1899).

Hab. N. America: winter visitor. This bird sometimes nests in Jamaica; it is possible that it may do so also in the Caymans.

11. EREUNETES PUSILLUS. (Little Stint.)

Ereunetes pusillus Cory, Auk, iii. p. 502 (1886); Sharpe, Hand-l. B. i. p. 162 (1899).

Hab. North America: winter visitor to the Caymans.

12. LIMONITES MINUTILLA. (Least Stint).

Tringa minutilla Cory, Auk, iii. p. 502 (1886).

Limonites minutilla Sharpe, Hand-l. B. i. p. 163 (1899).

Hab. North America: winter visitor to the Caymans.

13. НЕТЕRОРУGIA MACULATA. (Pectoral Sandpiper.)

Tringa maculata Vieill.; Cory, Auk, iii. p. 502 (1886).

Heteropygia maculata (V.); Sharpe, Hand-l. В. і. р. 163 (1899).

Hab. North America: winter visitor to the Caymans

14. Gallinago delicata Sharpe, Hand-l. B. i. p. 165 (1899).

Hab. North America: winter visitor to the West Indies and Central America.

I shot one or two examples of this bird in some marshes on the southern side of Grand Cayman. I have found no other records of its occurrence there.

15. Hydranassa ruficollis. (Red-necked Egret.)

Ardea tricolor ruficollis Cory, Auk, iii. p. 502 (1886: Grand Cayman, Little Cayman).

Hydranassa ruficollis Sharpe, Hand-l. B. i. p. 197 (1899).

Hab. Temperate E N. America to C. America, West Indies. Whether this bird breeds in the Cayman Islands I am unable to say, but it does so in Cuba and Jamaica.

16. NYCTANASSA VIOLACEA. (Yellow-crowned Night-Heron.)

Nycticorax violaceus (Linn.); Cory, Auk, iii. p. 502.

Nyctanassa violacea (Linn.); Sharpe, Hand-l. B. i. p. 197 (1899).

I have a specimen in my collection which I took in Cayman Brac.

Hab. Central and South America: fairly common in the Caymans, resident.

17. Butorides virescens. (Little Green Bittern.)

Ardea virescens Linn.; Cory, Auk, iii. p. 502 (1886: Grand Cayman); id. Auk, vi. p. 32 (1889: Cayman Brac).

Butorides virescens Nicoll, Ibis, 1904, p. 585 (Grand Cayman); Sharpe, Hand-l. B. i. p. 200 (1899).

Hab. North and Central America, West Indies: common in the Caymans, resident.

18. Botaurus lentiginosus. (American Bittern.)

Botaurus lentiginosus Sharpe, Hand-l. B. i. p. 204 (1899).

One ad. 2. 28. i. 04. Grand Cayman (coll. P. R. Lowe).

Hab. North and Central America: winter visitor to the West Indies.

This was the only individual that I saw in the Caymans.

19. Sula piscatrix. (Red-footed Booby.)

Sula cyanops (Sundev.); Cory, Auk, vi. p. 31 (Little Cayman, Cayman Brac).

Sula coryi Maynard, Contrib. to Science, no. 1, vol. i. p. 40 (1889: Little Cayman).

Sula piscator Nicoll, Ibis, 1904, p. 588 (Little Cayman). Sula piscatrix Sharpe, Hand-l. B. i. p. 237 (1899).

Hab. Widely distributed in the tropical seas; I have several examples in my collection from Little Cayman, where there is a large "rookery."

20. Fregata Aquila. (Greater Frigate-Bird.)

Fregata aquila Nicoll, Ibis, 1904, p. 589 (Little Cayman); Sharpe, Hand-l. B. i. p. 237 (1899).

Hab. Widely distributed in the tropical seas; I have taken specimens of the young in Little Cayman, where the bird breeds.

21. Falco columbarius. (American Merlin.)

Falco columbarius Sharpe, Hand-l. B. i. p. 275 (1899).

One ad. &. 27. ii. 05. Little Cayman (coll. P. R. Lowe).

One ad. &. 26. i. 04. Grand Cayman (coll. P. R. Lowe).

Hab. North America and the Antilles; I shot the two above-mentioned examples in the Caymans myself. No other records.

22. STRIX FLAMMEA FURCATA. (American Barn-Owl.)

Strix flammea furcata Cory, Auk, iii. p. 502 (1886: Grand Cayman or (?) Little Cayman).

Strix furcata Sharpe, Hand-l. B. i. p. 300 (1899).

Hab. North America Stated by Gosse to be resident in Jamaica; whether it is so in the Caymans I do not know, but it is highly probable.

#### 23. Amazona leucocephala.

Chrysotis leucocephala Cory, Auk, vi. p. 32 (1889 : Cayman Brac).

Amazona leucocephala Sharpe, Hand-l. B. ii. p. 22 (1900). Hab. This Parrot is said to be peculiar to Cuba. Whether

it has established itself on Cayman Brac or the examples taken there were merely stragglers I am unable to say.

24. Amazona caymanensis. (Grand Cayman Amazon.)

Chrysotis caymanensis Cory, Auk, iii. p. 497 (1886: Grand Cayman); Nicoll, Ibis, 1904, p. 584 (Grand Cayman); Lowe, Ibis, 1909, p. 340 (Grand Cayman).

Amazona caymanensis Sharpe, Hand-1. B. ii. p. 22 (1900).

Hab. Peculiar to Grand Cayman.

25. CERYLE ALCYON. (Belted Kingfisher.)

Ceryle alcyon Sharpe, Hand-l. B. ii. p. 50 (1900).

Hab. North America: a winter visitor to the Caymans, fairly common along the fringing mangroves.

#### 26. Coccyzus minor. (Mangrove Cuckoo.)

Coccyzus minor Cory, Auk, iii. p. 502 (1886: Grand Cayman, ? Little Cayman); Sharpe, Hand-l. B. ii. p. 163 (1900).

Hab. Resident in the Caymans, West Indies, and Northern and Eastern South America, Southern Florida.

27. Coccyzus minor Maynardi. (Maynard's Cuckoo.) Coccyzus maynardi Nicoll, Ibis, 1904, p. 584 (Grand Cayman).

Coccyzus minor maynardi Ridgw. Man. N. Amer. Birds, p. 274 (1887: Bahamas and Florida Keys); Sharpe, Hand-l. B. ii. p. 163 (1900).

Hab. Bahamas.

Mr. Nicoll has taken a specimen of this Bahaman subspecies on Grand Cayman: probably a visitor.

### 28. CROTOPHAGA ANI. (Black Ani.)

Crotophaga ani Linn.; Cory, Auk, iii. p. 502 (1886: Grand Cayman); id. Auk, vi. p. 32 (1889: Cayman Brac); Ridgw. Proc. U.S. Nat. Mus. vol. x. p. 574 (1887: Grand Cayman); Nicoll, Ibis, 1904, p. 584 (Grand Cayman); Sharpe, Hand-l. B. ii. p. 175 (1900).

Hab. South and Central America, West Indies: common and resident in the Caymans.

29. COLAPTES GUNDLACHI. (Gundlach's Woodpecker.)

Colaptes gundlachi Cory, Auk, iii. p. 498 (1886: Grand Cayman); Lowe, Ibis, 1909, p. 341 (Grand Cayman); Sharpe, Hand-l. B. ii. p. 201 (1900).

Hab. Peculiar to Grand Cayman, where it is fairly common and very tame.

30. MELANERPES CAYMANENSIS. (Cayman Woodpecker.) Centurus caymanensis Cory, Auk, iii. p. 499 (1886: Grand Cayman); Ridgw. Proc. U.S. Nat. Mus. vol. x. p. 574 (1887: Grand Cayman); Lowe, Ibis, 1909, p. 341 (Grand Cayman).

Melanerpes caymanensis Nicoll, Ibis, 1904, p. 584 (Grand Cayman); Sharpe, Hand-l. B. ii. p. 211 (1900).

Hab. Peculiar to and resident on Grand Cayman.

31. Sphyropicus varius. (Yellow-bellied Woodpecker.) Sphyropicus varius Sharpe, Hand-l. B. ii. p. 212.

Ad. 27. ii. 05. Little Cayman (coll. P. R. Lowe).

Hab. North America: a winter visitor to the Greater Antilles.

The specimen which I obtained on Little Cayman is the only record from the Caymans.

32. ELAINEA MARTINICA CAYMANENSIS. (Cayman Elainea.) Elainea martinica Cory, Auk, iii. p. 502 (1886: Grand Cayman); Ridgw. Proc. U.S. Nat. Mus. vol. x. p. 574 (1887: Grand Cayman); Cory, Auk, vi. p. 31 (1889: Little Cayman, Cayman Brae); Sclater, Cat. B. Brit. Mus. xiv. 1888, p. 141; Salv. & Godman, Biol. Centr.-Am., Aves, ii. 1888, p. 36; Sharpe, Hand-l. B. iii. p. 123 (1901: Grand Cayman); Nicoll, Ibis, 1904, p. 582 (Grand Cayman); id. ibid. p. 587 (Little Cayman).

Elainea pagana martinica (part.) Allen, Bull. Am. Mus. N. H. ii. 1889, p. 200 (Grand Cayman).

Elænia martinica caymanensis Berlepsch, Proc. Fourth Internat. Orn. Congr. 1907, p. 394 (Grand Cayman).

Elænia martinica riisii Lowe, Ibis, 1909, p. 342.

Hab. Peculiar to Grand Cayman, but the claims of this bird to rank as a subspecies peculiar to the island are, in my opinion, very slender. It is also very difficult to distinguish birds from Little Cayman and Cayman Brac from this supposed new subspecies.

33. Elainea Martinica complexa. (Cayman Brac Elainea.) Elainea martinica Cory, Auk, vi. 1889, p. 31 (Cayman Brac).

Elænia martinica complexa Berlepsch, Proc. Fourth Internat. Orn. Congr. 1907, p. 395 (Cayman Brac).

Hab. Peculiar to Cayman Brac.

I have not been able to appreciate the differences between Cayman Brac birds and those from the Grand and Little Cayman which I have considered elsewhere to be E. m. riisii.

34. Tolmarchus caudifasciatus caymanensis. (Grand Cayman Petchary.)

Pitangus caudifasciatus Cory, Auk, iii. p. 502 (1886: Grand Cayman); id. Auk, vi. p. 31 (1889: Cayman Brac); id. Cat. West Ind. Birds, 1892, p. 108 (Grand Cayman); Sclater, Cat. Birds Brit. Mus. xiv. 1888, p. 179 part. (Grand Cayman).

Pitangus caymanensis Nicoll, Ibis, 1904, p. 582 (Grand Cayman).

Tolmarchus caymanensis Ridgw. Proc. Biol. Soc. Wash. xviii., Sept. 12, 1905, p. 209; id. Birds North & Midd. Amer. pt. iv. p. 682 (1907: Grand Cayman, Cayman Brac?).

Tolmarchus caudifasciatus caymanensis Lowe, Ibis, 1909, p. 343 (Grand Cayman).

Hab. Peculiar to Grand Cayman and perhaps Cayman Brac.

## 35. Empidonax minimus. (Least Tyrant.)

Empidonax minimus Nicoll, Bull. B. O. C. 1904, vol. xiv. p. 95; id. Ibis, 1904, p. 582 (Grand Cayman); Sharpe, Hand-l. B. iii. p. 138 (1901).

Hab. Eastern North America: accidental during emigration on Grand Cayman.

#### 36. Myiarchus sagræ. (La Sagra's Tyrant.)

Myiarchus denigratus Cory, Auk, iii. p. 500 (1886: Grand Cayman); Ridgw. Proc. U.S. Nat. Mus. vol. x. p. 574 (1887: Grand Cayman); Nicoll, Ibis, 1904, p. 583 (Grand Cayman); Ridgw. Birds N. & Midd. Amer. pt. iv. 1907, p. 635.

Myiarchus sagræ Lowe, Ibis, 1909, p. 343 (Grand Cayman).

Hab. Cuba. Probably resident and breeding on Grand Cayman: a common bird there.

# 37. Tyrannus dominicensis. (Gray Kingbird.)

Tyrannus dominicensis Cory, Auk, iii. p. 502 (1886: Grand Cayman); id. Auk, vi. p. 31 (1887: Little Cayman, Cayman Brac); Sharpe, Hand-l. B. iii. p. 149 (1901).

Hab. Greater Antilles, Northern Lesser Antilles, coasts of America, and Bahamas.

38. HIRUNDO ERYTHROGASTER. (American Barn-Swallow.) Chelidon erythrogaster (Bodd.); Cory, Auk, vi. p. 31 (1889: Cayman Brac).

Hirundo erythrogaster Sharpe, Hand-l. B. iii. p. 193 1901).

Hab. N. America: south to S. America and West Indies in winter.

Probably only a spring and autumn migrant in the Caymans.

## 39. POLIOPTILA CÆRULEA. (Gray Gnatcatcher.)

Polioptila carulea Cory, Auk, iii. p. 501 (1886: Grand Cayman); id. Auk, iv. p. 7 (1887: Little Cayman); Sharpe, Hand-l. B. iii. p. 240 (1901)

Hab. A winter visitor to the Caymans and Cuba from the Eastern United States.

## 40. Mimus orpheus. (Jamaican Mocking-Bird.)

Mimus orpheus? Cory, Auk, iii. p. 501 (1886: Grand Cayman).

Minus polyglottos orpheus Cory, Auk, viii. p. 45 (1891: Grand Cayman); Ridgw. Birds N. & Midd. Amer. pt. iv. 1907, p. 231; Lowe, Ibis, 1909, p. 343 (Grand Cayman).

Mimus orpheus Ridgw. Proc. U.S. Nat. Mus. vol. x. p. 572 (1887: Grand Cayman); Nicoll, Ibis, 1904, p. 579 (Grand Cayman).

Hab. This bird is resident in Grand Cayman and probably in Little Cayman and Cayman Brac.

#### 41. GALEOSCOPTES CAROLINENSIS. (Cat-bird.)

Galeoscoptes carolinensis (Linn.); Cory, Auk, vi. p. 31 (1889: Cayman Brac); id. Cat. W.I. Birds, 1892, p. 121 (Grand Cayman); Nicoll, Ibis, 1904, p. 579; Ridgw. Birds N. &. Midd. Amer. pt. iv. 1907, p. 219; Sharpe, Hand-l. B. iv. p. 106 (1903).

I have a specimen in my collection from Grand Cayman. Hab. Temperate North America in general: a winter visitor to the Caymans.

### 42. MIMOCICHLA RAVIDA. (Grand Cayman Thrush.)

Mimocichla ravida Cory, Auk, iii. p. 499 (1889: Grand Cayman); id. Cat. W.I. Birds, 1892, pp. 19, 122, 129, 157; id. Birds West Indies, 1889, p. 285 (Grand Cayman); Ridgw.

Birds N. &. Midd. Amer. pt. iv. 1907, p. 87; Lowe, Ibis, 1909, p. 340.

Mimocichla ravida Sharpe, Hand-l. B. iv. p. 116 (1903). Hab. Peculiar to Grand Cayman.

43. Mimocichla Rubripes Coryi. (Cayman Brac Thrush.) Mimocichla rubripes Cory, Auk, vi. p. 31 (1889: Cayman Brac).

Mimocichla coryi Sharpe, in Seebohm's Monogr. Turdidæ, ii. 1902, p. 212 (Cayman Brac); Sharpe, Hand-l. B. iv. p. 116 (1903).

Mimocichla rubripes coryi Ridgw. Birds N. & Midd. Amer. pt. iv. 1907, p. 86.

Hab. Peculiar to Cayman Brac.

44. VIREOSYLVA CALIDRIS BARBATULA. (Black-whiskered Vireo.)

Vireo calidris barbatulus (Cab.); Cory, Auk, iv. p. 7 (1887: Little Cayman).

Vireo barbatulus Sharpe, Hand-l. B. iv. p. 247 (1903).

Vireosylva calidris barbatulus Ridgw. Birds N. & Midd. Amer. 1904, pt. iii. p. 142.

Hab. Bahamas, Cuba, and Southern Florida: only met with in the Caymans as an occasional straggler.

## 45. VIREOSYLVA CAYMANENSIS. (Cayman Vireo.)

Vireo caymanensis Cory, Auk, iv. p. 7 (1887: Grand Cayman); id. Auk, vi. p. 31 (1889: Little Cayman, Cayman Brac); Ridgw. Proc. U.S. Nat. Mus. x. p. 573 (1887: Grand Cayman); Nicoll, Ibis, 1904, p. 580 (Grand Cayman); Sharpe, Hand-l. B. iv. p. 247 (1903).

Vireosylva caymanensis Ridgw. Birds N. & Midd. Amer. pt. iii. 1904, p. 136; Lowe, Ibis, 1909, p. 344 (Grand Cayman).

Hab. Peculiar to the Cayman Islands.

## 46. VIREO CRASSIROSTRIS ALLENI. (Allen's Vireo.)

Vireo alleni Cory, Auk, iii. p. 500 (1886: Grand Cayman); id. Auk, vi. p. 31 (1889: Cayman Brac); Sharpe, Hand-l. B. iv. p. 251 (1903).

Vireo crassirostris alleni Lowe, Ibis, 1909, p. 344 (Grand Cayman).

Hab. Peculiar to the Caymans.

47. Ampelis cedrorum. (American Waxwing.)

Ampelis cedrorum Cory, Auk, vi. p. 31 (1889: Little Cayman); Sharpe, Hand-l. B. iv. p. 259 (1903).

Hab. North America: an occasional visitor to the Caymans in winter.

48. MNIOTILTA VARIA. (Black-and-white Tree-Warbler.)

Mniotilta varia Cory, Auk, iii. p. 501 (1886: Grand Cayman); Sharpe, Hand-l. B. v. p. 96 (1909).

I have shot this bird on Little Cayman Island.

Hab. Eastern North America: a winter visitor to the Caymans.

49. Helminthotherus vermivorus. (Pennsylvanian Swamp-Warbler.)

Helmitherus vermivorus (Gmel.); Cory, Auk, vi. p. 31 (1889: Cayman Brac).

Helminthotherus vermivorus Sharpe, Hand-l. B. v. p. 97 (1909).

Hab. Eastern United States: a rare winter visitor to the Caymans.

50. Parula americana. (Northern Warbler.)

Compsothlypis americana Cory, Auk, vi. p. 31 (1889: Cayman Brac).

Parula americana Sharpe, Hand-l. B. v. p. 100 (1909).

I have taken this bird on Grand Cayman.

Hab. Eastern United States and British Provinces: a winter visitor to the Caymans and throughout the West Indies.

51. DENDRŒCA PETECHIA AURICAPILLA. (Cayman Yellow Warbler.)

Dendroica petechia gundlachi Cory, Auk, iii. p. 501 (1886: Grand Cayman).

Dendroica auricapilla Ridgw. Proc. U.S. Nat. Mus. vol. x. p. 572 (1887); Nicoll, Ibis, 1904, p. 579 (Grand Cayman).

Dendroica petechia auricapilla Ridgw. Birds N. & Midd. Amer. pt. ii. 1902, p. 517 (Grand Cayman).

Dendroica auricapilla Cory, Auk, vi. p. 31 (1889: Little Cayman).

Dendræca petechia (auricapilla?) Lowe, Ibis, 1909, p. 344 (Grand Cayman).

Dendræca auricapilla Sharpe, Hand-l. B. v. p. 103 (1909). I have shot this bird on Little Cayman Island.

Hab. Peculiar to Grand Cayman and Little Cayman.

52. DENDRECA TIGRINA. (Cape May Warbler.)

Dendroica tigrina (Gmel.); Nicoll, Ibis, 1904, p. 579 (Grand Cayman).

Dendræca tigrina Sharpe, Hand-l. B. v. p. 105 (1909).

Hab. Eastern North America and Canada: apparently a rare winter visitor to the Caymans. This bird is said to be resident and to breed on the high mountains of Jamaica.

53. Dendræca cærulescens. (Black-throated Blue Warbler.)

Dendroica carulescens Cory, Auk, vi. p. 31 (1887: Little Cayman).

Dendræca cærulescens Sharpe, Hand-l. B. v. p. 105 (1909).

Hab. Eastern North America: a rare winter visitor to the Cavmans.

54. Dendræca coronata. (Myrtle Warbler.)

Dendroica coronata Nicoll, Ibis, 1904, p. 579 (Grand Cayman).

Dendræca coronata Sharpe, Hand-l. B. v. p. 106 (1909).

Hab. North America: a common winter visitor to the Caymans. It is possible that some individuals stay all the year and breed.

55. Dendræca cærulea. (Cærulean Warbler.)

Dendroica cærulea Wils.; Cory, Auk, iii. p. 501 (1886).

Dendræca cærulea Sharpe, Hand-l. B. v. p. 107 (1909).

Dendroica rara (Wilson); Ridgw. Birds N. & Midd. Amer. pt. ii. p. 570 (1902).

Hab. Eastern North America: a rare winter visitor to the Caymans.

56. Dendræca dominica. (Yellow-throated Warbler.)

Dendroica dominica (Linn.); Cory, Auk, iii. p. 501 (1886: Grand Cayman); Cory, Auk, iv. p. 7 (1887: Little Cayman).

Dendræca dominica Sharpe, Hand-l. B. v. p. 107 (1909).

Hab. Atlantic Coast districts of United States: not a common winter visitor to the Caymans. This bird or a subspecies of it (D. d. albilora) is said to breed occasionally in Jamaica.

I have a specimen in my collection from Little Cayman.

57. DENDRŒCA DISCOLOR. (Prairie Warbler.)

Dendroica discolor (Vieill.); Cory, Auk, vi. p. 31 (1889: Little Cayman, Cayman Brac).

Dendræca discolor Sharpe, Hand-l. B. v. p. 110 (1909).

Hab. Eastern United States. The Prairie Warbler is occasionally met with in the Caymans as a winter visitor alongside of its resident colleague D. vitellina. I have one or two examples from Grand Cayman.

## 58. DENDRŒCA VITELLINA. (Vitelline Warbler.)

Dendroica vitellina Cory, Auk, iii. p. 497 (1886: Grand Cayman); id. Auk, vi. p. 31 (1889: Little Cayman, Cayman Brac); Ridgw. Proc. U.S. Nat. Mus. vol. x. p. 574 (1887: Grand Cayman); id. Birds N. & Midd. Amer. pt. ii. p. 610 (1902: Grand Cayman); Nicoll, Ibis, 1904, p. 580 (Grand Cayman).

Dendræca vitellina Lowe, Ibis, 1909, pp. 337 & 345 (Grand Cayman); Sharpe, Hand-l. B. v. p. 110 (1909).

Hab. Peculiar to Grand Cayman and Swan Island.

This resident species is much more common on Swan Island than it is on Grand Cayman.

59. Dendræca crawfordi. (Lord Crawford's Wood-Warbler.)

Dendroica crawfordi Nicoll, Bull. B. O. C. vol. xiv. p. 95 (June 15, 1904); id. Ibis, 1904, p. 586 (Little Cayman).

Dendræca crawfordi Lowe, Ibis, 1909, p. 337 (Little Cayman); Sharpe, Hand-l. B. v. p. 110 (1909).

Hab. Peculiar to Little Cayman.

60. DENDRŒCA PALMARUM. (Palm-Warbler.)

Dendroica palmarum (Gmel.); Cory, Auk, vi. p. 31 (1889: Little Cayman, Cayman Brac); Nicoll, Ibis, 1904, p. 586 (Little Cayman).

Dendræca palmarum Sharpe, Hand-l. B. v. p. 110 (1909). Hab. Eastern North America: a very abundant winter visitor to the Cayman Islands.

I have examples of this species in my collection from Grand Cayman and Little Cayman.

61. SIURUS AURICAPILLUS. (Gold-crowned Water-Thrush.) Seiurus auricapillus (Linn.); Cory, Auk, vi. p. 31 (1889: Cayman Brac).

Siurus auricapillus Sharpe, Hand-I. B. v. p. 112 (1909).

Hab. Eastern North America: a fairly common winter visitor to the Caymans.

I have taken this bird on Little Cayman Island.

62. SIURUS MOTACILLA. (Louisiana Water-Thrush.) Seiurus motacilla (Vieill.); Cory, Auk, iii. p. 501 (1886: Grand Cayman).

Siurus motacilla Sharpe, Hand-l. B. v. p. 112 (1909).

Hab. Eastern United States: an occasional winter visitor to the Caymans.

63. SIURUS NOVEBORACENSIS. (New York Water-Thrush.) Seiurus noveboracensis Cory, Auk, iv. p. 7 (1887: Grand Cayman, in August); Nicoll, Ibis, 1904, p. 581 (Grand Cayman).

Siurus noveboracensis Sharpe, Hand-l. B. v. p. 112 (1909).

Hab. N. America. A winter visitor to the Caymans. Mr. Cory records one (loc. cit.) as having been taken in August.

64. GEOTHLYPIS TRICHAS. (Maryland Yellowthroat.)

Geothlypis trichas Cory, Auk, vi. p. 31 (1889: Little Cayman); Sharpe, Hand-l. B. v. p. 113 (1909).

Hab. Atlantic Coast districts of the United States: a winter visitor to the Caymans. I have also taken the Yellowthroat on Little Cayman, but not having enough specimens I am unable to say whether it is the Northern form of Yellowthroat (G. trichas brachydactyla). I have taken the short-winged subspecies on Swan Island.

65. Setophaga ruticilla. (American Redstart.)

Setophaga ruticilla (Linn.); Cory, Auk, vi. p. 31 (1889 : Cayman Brac); Sharpe, Hand-l. B. v. p. 120 (1909).

Hab. Temperate North America: a winter visitor to the Caymans.

66. MELOPYRRHA TAYLORI. (Taylor's Finch.)

Melopyrrha nigra Cory, Auk, iii. p. 501 (1886: Grand Cayman).

Melopyrrha taylori Hartert, Nov. Zool. vol. iii. p. 257 (1896: Grand Cayman); Ridgw. Birds North & Midd. Amer. pt. i. p. 563 (1901: Grand Cayman); Nicoll, Ibis, 1904, p. 582 (Grand Cayman); Lowe, Ibis, 1909, p. 345 (Grand Cayman); Sharpe, Hand-l. B. v. p. 215 (1909: Grand Cayman).

Hab. Peculiar to Grand Cayman, where apparently it is by no means common and also far from conspicuous.

67. Euethia Olivacea. (Yellow-faced Grass-Quit.)

Euetheia olivacea (Gmel.); Cory, Auk, iii. p. 502 (1886: Grand Cayman); id. Auk, vi. p. 31 (1889: Little Cayman, Cayman Brac); Ridgw. Proc. U.S. Nat. Mus. vol. x. p. 574 (1887: Grand Cayman); id. Birds North & Midd. Amer. pt. i. p. 530 (1901: Grand Cayman); Nicoll, Ibis, 1904, p. 581 (Grand Cayman).

Euetheia lepida Cory, Cat. W.I. Birds, 1892, pp. 16, 113, 151, part. (Grand Cayman, Little Cayman).

Euethia olivacea Sharpe, Hand-l. B. v. p. 215 (1909).

Hab. Fairly common and resident in Grand Cayman and
Little Cayman: also found in Cuba, Jamaica, and Haiti.

68. Euethia olivacea coryi. (Cory's Grass-Quit.)

Euetheia olivacea (nec Emberiza olivacea Linn.) Cory,
Auk, vi. 1889, p. 31 (Cayman Brac).

Euetheia lepida (nec Fringilla lepida Linn.) Cory, Cat. W.I. Birds, 1892, pp. 16, 113, 151, part. (Cayman Brac).

Euetheia coryi Ridgw. Auk, xv., Oct. 1898, p. 322 (Cayman Brac; coll. Field Columb. Mus.).

Euctheia olivacea coryi Ridgway, Birds North & Midd. Amer. pt. i. p. 532 (1901).

Euethia coryi Sharpe, Hand-l. B. v. p. 215 (1909). Hab. Peculiar to Cayman Brac.

69. Passerculus sandwichensis. (Savannah Sparrow.)

Passerculus sandwichensis Nicoll, Ibis, 1904, p. 582
(Grand Cayman); Sharpe, Hand-l. B. v. p. 290 (1909).

Hab. Eastern North America, migrating south in winter to Cuba, the Bahamas, and the Gulf Coast: a winter visitor to the Caymans.

## 70. SPINDALIS SALVINI. (Salvin's Spindalis.)

Spindalis salvini Cory, Auk, iii. p. 499 (1886: Grand Cayman); id. Birds W.I. 1889, p. 289; id. Cat. W.I. Birds, 1892, pp. 16, 114, 129, 152; Ridgw. Birds North & Midd. Amer. pt. ii. p. 74 (1902: Grand Cayman); Lowe, Ibis, 1909, p. 346 (Grand Cayman); Sharpe, Hand-l. B. v. p. 381 (1909).

Hab. Peculiar to Grand Cayman.

#### 71. CEREBA SHARPII. (Sharpe's Banana-Quit.)

Certhiola sharpei Cory, Auk, iii. p. 497 (1886: Grand Cayman); id. Auk, vi. p. 31 (1889: Little Cayman); Ridgw. Proc. U.S. Nat. Mus. vol. x. p. 574 (1887: Grand Cayman); Nicoll, Ibis, 1904, p. 580 (Grand Cayman and Little Cayman).

Cæreba sharpei Ridgw. Birds N. & Midd. Amer. ii. p. 404

(1902: Grand and Little Cayman, and Cayman Brac); Lowe, Ibis, 1909, p. 345 (Grand and Little Cayman); Sharpe, Hand-l. B. v. p. 342 (1909).

Hab. Peculiar to the Caymans.

72. Dolichonyx oryzivorus. (Rice-bird.)

Dolichonyx oryzivorus (Linn.); Cory, Auk, vi. p. 31 (1889: Little Cayman); Sharpe, Hand-l. B. v. p. 489(1909).

Hab. An occasional visitor on passage to and from the north.

73. ICTERUS BAIRDI. (Baird's Banana-bird.)

Icterus bairdi Cory, Auk, iii. p. 500 (1886: Grand Cayman); id. Birds W.I. 1889, p. 291; id. Cat. W.I. Birds, 1892, pp. 15, 110, 129, 146; Ridgw. Birds N. & Midd. Amer. pt. ii. p. 304 (1902: Grand Cayman); Lowe, Ibis, 1909, p. 340; Sharpe, Hand-l. B. v. p. 505 (1909).

Hab. Peculiar to Grand Cayman: not at all common.

74. Holoquiscalus caymanensis. (Grand Cayman Grackle.)

Quiscalus caymanensis Cory, Auk, iii. p. 499 (1886: Grand Cayman); id. Birds W.I. 1889, p. 291; id. Cat. W.I. Birds 1892, pp. 15, 111, 129, 147; Ridgw. Proc. U.S. Nat. Mus. vol. x. p. 574 (Grand Cayman); Nicoll, Ibis, 1904, p. 581 (Grand Cayman).

Holoquiscalus caymanensis Ridgw. Proc. Wash. Ac. Sci. iii., Apr. 15, 1901, p. 151; id. Birds N. & Midd. Amer. pt. ii. 1902, p. 229; Lowe, Ibis, 1909, p. 347 (Grand Cayman); Sharpe, Hand-l. B. v. p. 510 (1909).

Hab. Peculiar to Grand Cayman.

75. Holoquiscalus gundlachi. (Gundlach's Grackle.)

Quiscalus gundlachi Cass.; Cory, Auk, vi. p. 31 (1889: Cayman Brac); id. Cat. W.I. Birds, 1892, pp. 15, 129, 147 (Little Cayman, Cayman Brac); Nicoll, Ibis, 1904, p. 587 (Little Cayman).

Holoquiscalus gundlachi Ridgw. Birds North & Midd. Amer. pt. ii. p. 226 (1902: Little Cayman and Cayman Brac); Sharpe, Hand-l. B. v. p. 509 (1909).

Hab. Peculiar to Cuba, Little Cayman, and Cayman Brac. ser. IX.—vol. v.